

REMARKS

Claims 1-12 are pending in the application.

All of the outstanding rejections, except for those maintained in the present Remarks, have been withdrawn in the light of Applicants' amendments/remarks filed on May 1, 2009. Although the Examiner states otherwise, it is the position of the Applicants that new grounds of rejection are set forth in the outstanding Office Action. Thus, the Office Action should be designated as being non-final.

Claims 1-12 are rejected under 35 USC 103(a) over Jonas et al. (US 2002/0217359) in view of the admitted prior art (Page 6, paragraph 10 of the Specification) or Wessling et al. (US 5,567,355).

Rejection under 35 U.S.C. §103(a)

Claim 1

In claim 1, the deionizing step is performed by passing of the liquid through a column filled with an ion exchanger. The method of the present invention permits the easy production of an organic solvent dispersion of an intrinsically conductive polymer, with its water content reduced below 1%; see original claims 5 and 10.

The Jonas et al '355 reference discloses a process for preparing a dispersion or a solution containing an optionally substituted polythiophene in an organic solvent, comprising

a) adding a water-miscible organic solvent or a water-miscible solvent mixture to an aqueous dispersion or solution comprising optionally substituted polythiophenes, and

b) removing at least some of the water from the mixture resulting from step a), and thereby forming the dispersion or the solution.

The Jonas et al. reference also discloses the deionizing step in Example 1 by adding ion exchangers to the aqueous solution containing polythiophene⁺An⁻ ion complex, and then stirring the mixture.

On the other hand, the inventive deionizing step is performed by passing of the liquid through a column filled with an ion exchanger.

Thus, the deionizing step of the present invention is distinguished as being different from that of Jonas et al.

Furthermore, according to the inventive method of passing the liquid, the water content in the organic solvent dispersion of the intrinsically conductive polymer can be attained to below 1%.

However, as shown in Comparative Example 3 in the present specification, when deionization is carried out by mixing ion exchangers with the aqueous solution containing polythiophene⁺An⁻ ion complex like the method of Jonas et al., a uniform organic solvent dispersion was not obtained because a large amount of aggregate occurred during solvent substitution and the phase separated into two layers.

That is, the method of Jonas et al. does not yield the organic solvent dispersion of the intrinsically conductive polymer which has a water content of below 1%.

Claim 3

In claim 3, ultrafiltration can be carried out for removing free ions and excess dopant before deionization.

In this regard, the Examiner asserts that "The process involves 1) preparing an aqueous suspension containing polythiophene⁺An⁻ Ion complex (polythiophene⁺ is a polymer), which is subjected to both anion and cation exchangers (method of deionization), and a membrane method, such as ultrafiltration, 2) adding an organic solvent, such as N-methylpyrrolidone, alcohols and esters, to the suspension,..." (Emphasis added.)

However, the Jonas reference discloses that step b) set forth in claim 1 can be carried out by a membrane process such as ultrafiltration or by distillation for removing at least some of the water from the mixture (paragraph [0077]). In the method of Jonas et al., step b) is carried out after step a).

Thus, in the invention of Jonas et al., ultrafiltration is carried out after deionization.

Accordingly, the Jonas et al. reference fails to disclose, suggest or teach that ultrafiltration is carried out before deionization. Moreover, there is no anticipation or *prima facie* case of obviousness with respect to the claims in the present application. Therefore, the claims herein are novel and non-obvious over the cited prior art. Hence, favorable consideration and withdrawal of the outstanding rejection are respectfully requested.

In view of the above remarks, the Applicants believe that the pending application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Raymond C. Stewart, Reg. No. 21,066, at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

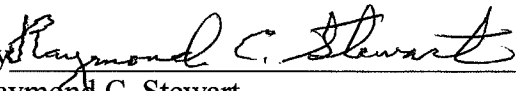
Application No. 10/590,854
Response dated November 10, 2009
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Docket No.: 0171-1300PUS1

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

Dated: November 10, 2009

Respectfully submitted,

By 
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